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□□□ Technological Singularity □ AlphaGo Zero □ superhuman □□□ [19]□

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[1] AI，A Modern Approach □□ "Aristotle... was the first to formulate a precise set of laws governing the rational part of the mind."(On page 5)□

Galileo Galilei ，Dialogue Concerning the Two Chief World Systems □□□□□□□□□□□□□□□□□□□□□□□□□□□

Immanuel Kant □□

Gödel's theorems □□

 "a <u>precise</u> set of laws governing the rational part of the mind"。

[2] BRAIN Initiative mental diseases anxiety disorders like depression and post-traumatic stress disorder、obesity and eating disorders、bipolar disorder、and mental retardation disorders diseases

BRAIN Initiative personalities mental diseases Big Data

 Down's syndrome BRAIN Initiative

[3] Leucotomy in England and Wales, 1942-1954 9284 41 28 25 2 4

 personality intelligence 25 personality intelligence clinical condition 41 28 clinical condition personality intelligence

leucotomy

 Renato M.E. Sabbatini Even lobotomy's preponents admitted that only one third of the operated patients would improve, while one-third remained the same, and one-third got worst Leucotomy in England and Wales, 1942-1954 http://www.cerebromente.org.br/n02/historia/lobotomy.htm。

one third would improve one-third remained the same clinical condition personality intelligence

personality intelligence leucotomy BRAIN Initiative

[4]

 peer review peer review

 Nature AlphaGo Zero superhuman generic human

[5] Cracking Go Deep Blue AlphaGo AlphaGo

[6] http://www.alphago-games.com/，AlphaGo Zero 与 AlphaGo Zero https://www.101weiqi.com/chessbook/player/38348/

[7] AlphaGo Master AlphaGo Master

[8] http://www.alphago-games.com/，其中Full Strength of Alphago Zero, i.e. Final Form 40 Blocks，20 Blocks Not Full Strength of Alphago Zero Alphago Zero

[9]

关于 AlphaGo Google AlphaGo 的发展，AlphaGo Zero AlphaGo Human level artificial intelligence AlphaGo

[10] 2012 2015

:"Go gaming is strictly defined within a very small space. Industrial automations are typically designed in well controlled environments, but not strictly defined. Car driving is regulated, but the environment is not well controlled"

[11]

[12] Dialogue Concerning the Two Chief Word Systems Socratic Method

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[14] Personal computers、Internet、smartphones □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ digital cameras、GPS、smart wearables、virtual reality、quantum computer □□□□□□□□□

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